

The MEANS Procedure

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
ide	identifier	178	1.9382022	0.7750350	1.0000000	3.0000000
alco	Alcohol	178	13.0006180	0.8118265	11.0300000	14.8300000
mal	Malic acid	178	2.3363483	1.1171461	0.7400000	5.8000000
ash	Ash	178	2.3665169	0.2743440	1.3600000	3.2300000
alc	Alcalinity of ash	178	19.4949438	3.3395638	10.6000000	30.0000000
mag	Magnesium	178	99.7415730	14.2824835	70.0000000	162.0000000
tot	Total phenols	178	2.2951124	0.6258510	0.9800000	3.8800000
fla	Flavanoids	178	2.0292697	0.9988587	0.3400000	5.0800000
non	Nonflavanoid phenols	178	0.3618539	0.1244533	0.1300000	0.6600000
pro	Proline	178	746.8932584	314.9074743	278.0000000	1680.00
col	Color intensity	178	5.0580899	2.3182859	1.2800000	13.0000000
hue	Hue	178	0.9574494	0.2285716	0.4800000	1.7100000
od2	OD280/OD315 of diluted wines	178	2.6116854	0.7099904	1.2700000	4.0000000

The UNIVARIATE Procedure
Variable: mal (Malic acid)

identifier=1

Moments			
N	59	Sum Weights	59
Mean	2.01067797	Sum Observations	118.63
Std Deviation	0.68854886	Variance	0.47409953
Skewness	2.13654724	Kurtosis	3.42804244
Uncorrected SS	266.0245	Corrected SS	27.4977729
Coeff Variation	34.2446116	Std Error Mean	0.08964143

Basic Statistical Measures			
Location		Variability	
Mean	2.010678	Std Deviation	0.68855
Median	1.770000	Variance	0.47410
Mode	1.730000	Range	2.69000
		Interquartile Range	0.29000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	22.43023	Pr > t 	<.0001
Sign	M	29.5	Pr >= M 	<.0001
Signed Rank	S	885	Pr >= S 	<.0001

Tests for Normality				
Test	Statistic		p Value	
Shapiro-Wilk	W	0.646978	Pr < W	<0.0001
Kolmogorov-Smirnov	D	0.303216	Pr > D	<0.0100
Cramer-von Mises	W-Sq	1.58527	Pr > W-Sq	<0.0050
Anderson-Darling	A-Sq	8.517502	Pr > A-Sq	<0.0050

Quantiles (Definition 5)	
Level	Quantile
100% Max	4.04
99%	4.04
95%	3.98
90%	3.59
75% Q3	1.95
50% Median	1.77

The UNIVARIATE Procedure
Variable: mal (Malic acid)

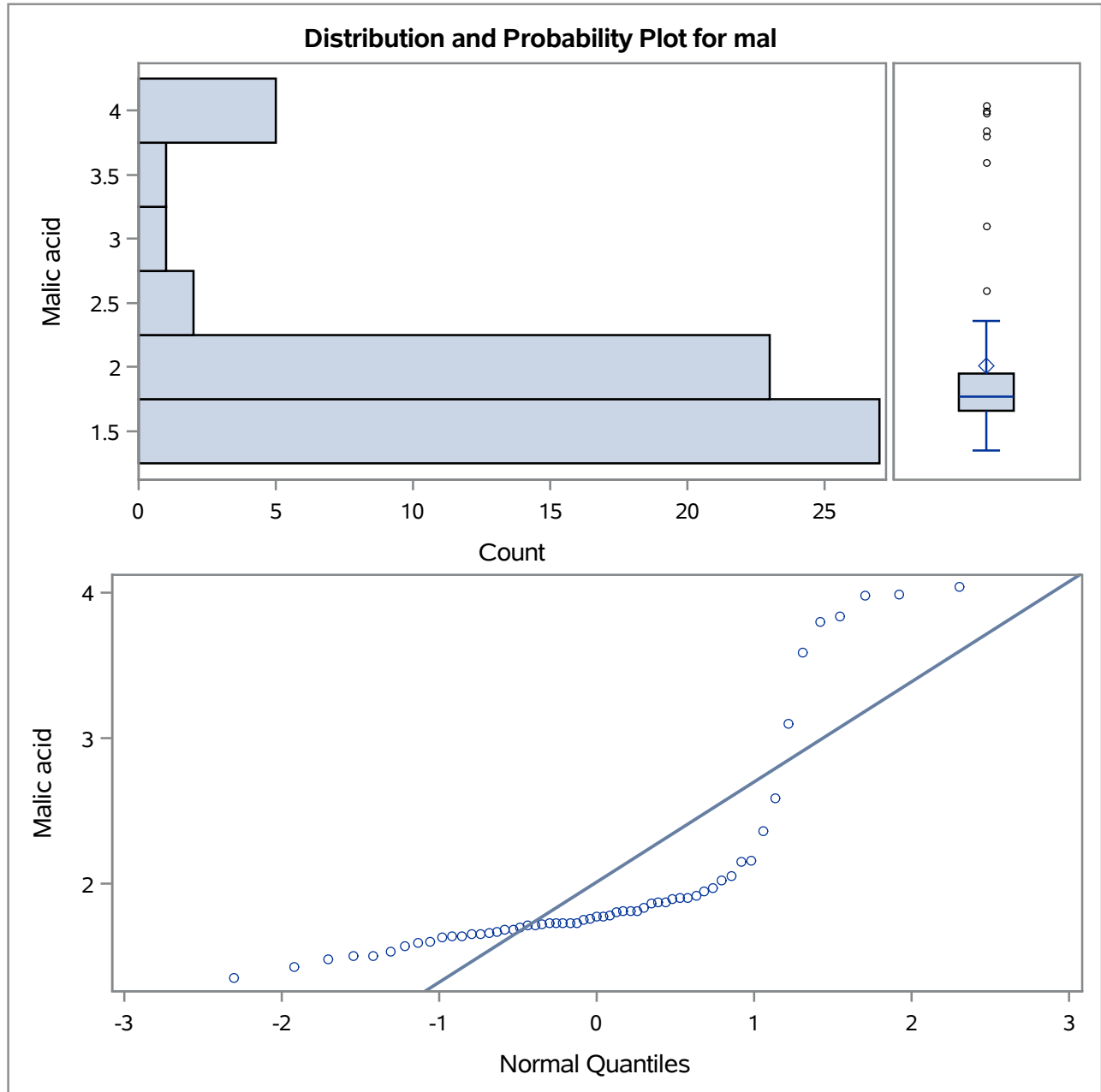
identifier=1

Quantiles (Definition 5)	
Level	Quantile
25% Q1	1.66
10%	1.53
5%	1.48
1%	1.35
0% Min	1.35

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
1.35	10	3.80	22
1.43	59	3.84	42
1.48	12	3.98	44
1.50	39	3.99	40
1.50	31	4.04	46

The UNIVARIATE Procedure

identifier=1



The UNIVARIATE Procedure
Variable: mal (Malic acid)

identifier=2

Moments			
N	71	Sum Weights	71
Mean	1.93267606	Sum Observations	137.22
Std Deviation	1.01556875	Variance	1.03137988
Skewness	1.62309788	Kurtosis	2.62230193
Uncorrected SS	337.3984	Corrected SS	72.1965915
Coeff Variation	52.5472825	Std Error Mean	0.12052584

Basic Statistical Measures			
Location		Variability	
Mean	1.932676	Std Deviation	1.01557
Median	1.610000	Variance	1.03138
Mode	1.510000	Range	5.06000
		Interquartile Range	0.91000

Note: The mode displayed is the smallest of 2 modes with a count of 3.

Tests for Location: $\mu_0=0$				
Test	Statistic		p Value	
Student's t	t	16.03537	Pr > t 	<.0001
Sign	M	35.5	Pr >= M 	<.0001
Signed Rank	S	1278	Pr >= S 	<.0001

Tests for Normality				
Test	Statistic		p Value	
Shapiro-Wilk	W	0.833878	Pr < W	<0.0001
Kolmogorov-Smirnov	D	0.191093	Pr > D	<0.0100
Cramer-von Mises	W-Sq	0.695004	Pr > W-Sq	<0.0050
Anderson-Darling	A-Sq	3.877616	Pr > A-Sq	<0.0050

Quantiles (Definition 5)	
Level	Quantile
100% Max	5.80
99%	5.80
95%	4.30
90%	3.43
75% Q3	2.16

The UNIVARIATE Procedure
Variable: mal (Malic acid)

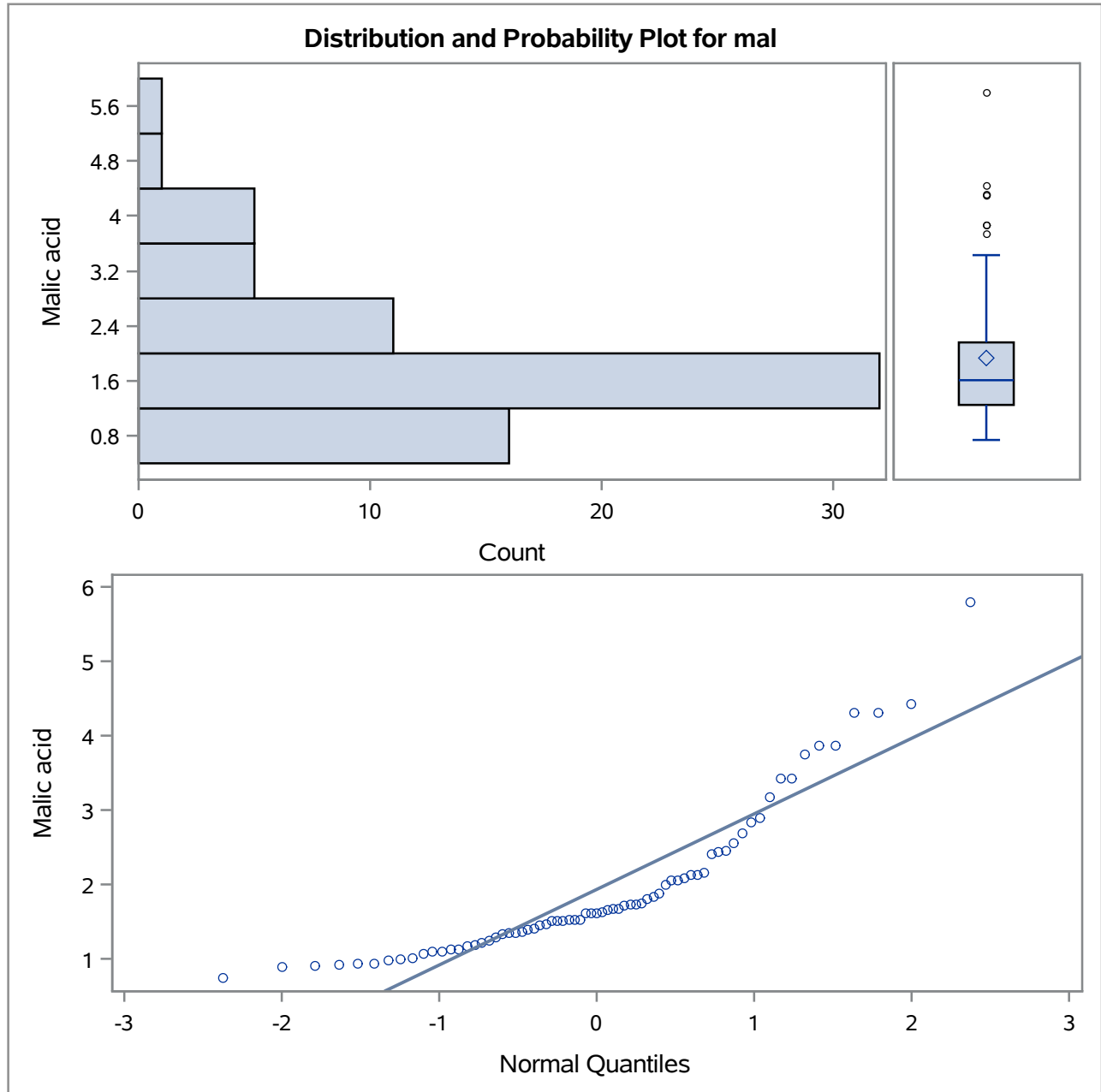
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Quantiles (Definition 5)	
Level	Quantile
50% Median	1.61
25% Q1	1.25
10%	0.99
5%	0.92
1%	0.74
0% Min	0.74

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0.74	114	3.87	80
0.89	85	4.30	130
0.90	77	4.31	125
0.92	81	4.43	123
0.94	69	5.80	124

The UNIVARIATE Procedure

identifier=2



The UNIVARIATE Procedure
Variable: mal (Malic acid)

identifier=3

Moments			
N	48	Sum Weights	48
Mean	3.33375	Sum Observations	160.02
Std Deviation	1.08790571	Variance	1.18353883
Skewness	0.10131899	Kurtosis	-0.3330404
Uncorrected SS	589.093	Corrected SS	55.626325
Coeff Variation	32.6330921	Std Error Mean	0.15702566

Basic Statistical Measures			
Location		Variability	
Mean	3.333750	Std Deviation	1.08791
Median	3.265000	Variance	1.18354
Mode	3.030000	Range	4.41000
		Interquartile Range	1.42000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	21.23061	Pr > t	<.0001
Sign	M	24	Pr >= M	<.0001
Signed Rank	S	588	Pr >= S	<.0001

Tests for Normality				
Test	Statistic		p Value	
Shapiro-Wilk	W	0.98372	Pr < W	0.7377
Kolmogorov-Smirnov	D	0.054041	Pr > D	>0.1500
Cramer-von Mises	W-Sq	0.024053	Pr > W-Sq	>0.2500
Anderson-Darling	A-Sq	0.184223	Pr > A-Sq	>0.2500

Quantiles (Definition 5)	
Level	Quantile
100% Max	5.650
99%	5.650
95%	5.190
90%	4.950
75% Q3	4.005
50% Median	3.265

The UNIVARIATE Procedure
Variable: mal (Malic acid)

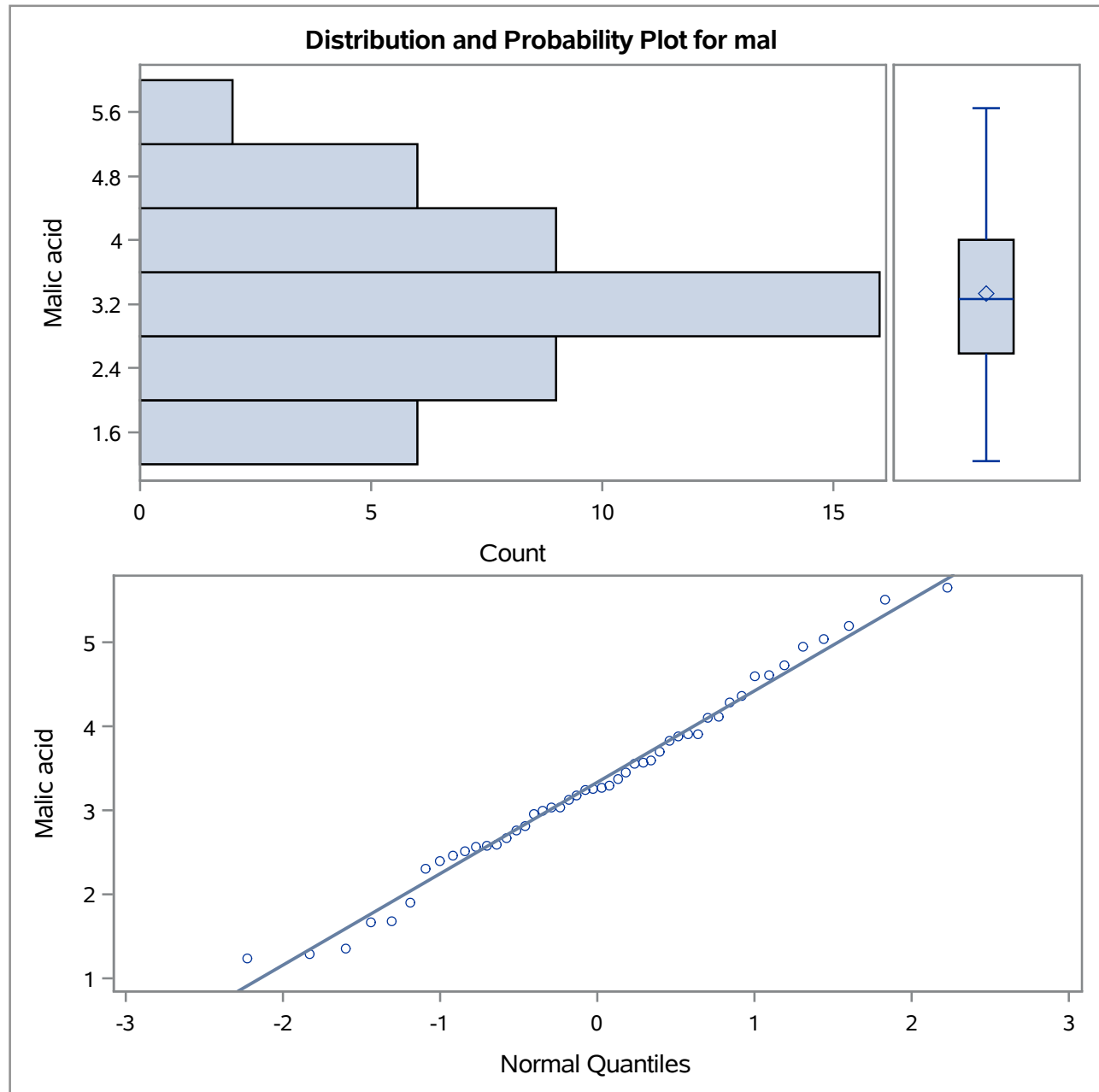
identifier=3

Quantiles (Definition 5)	
Level	Quantile
25% Q1	2.585
10%	1.680
5%	1.350
1%	1.240
0% Min	1.240

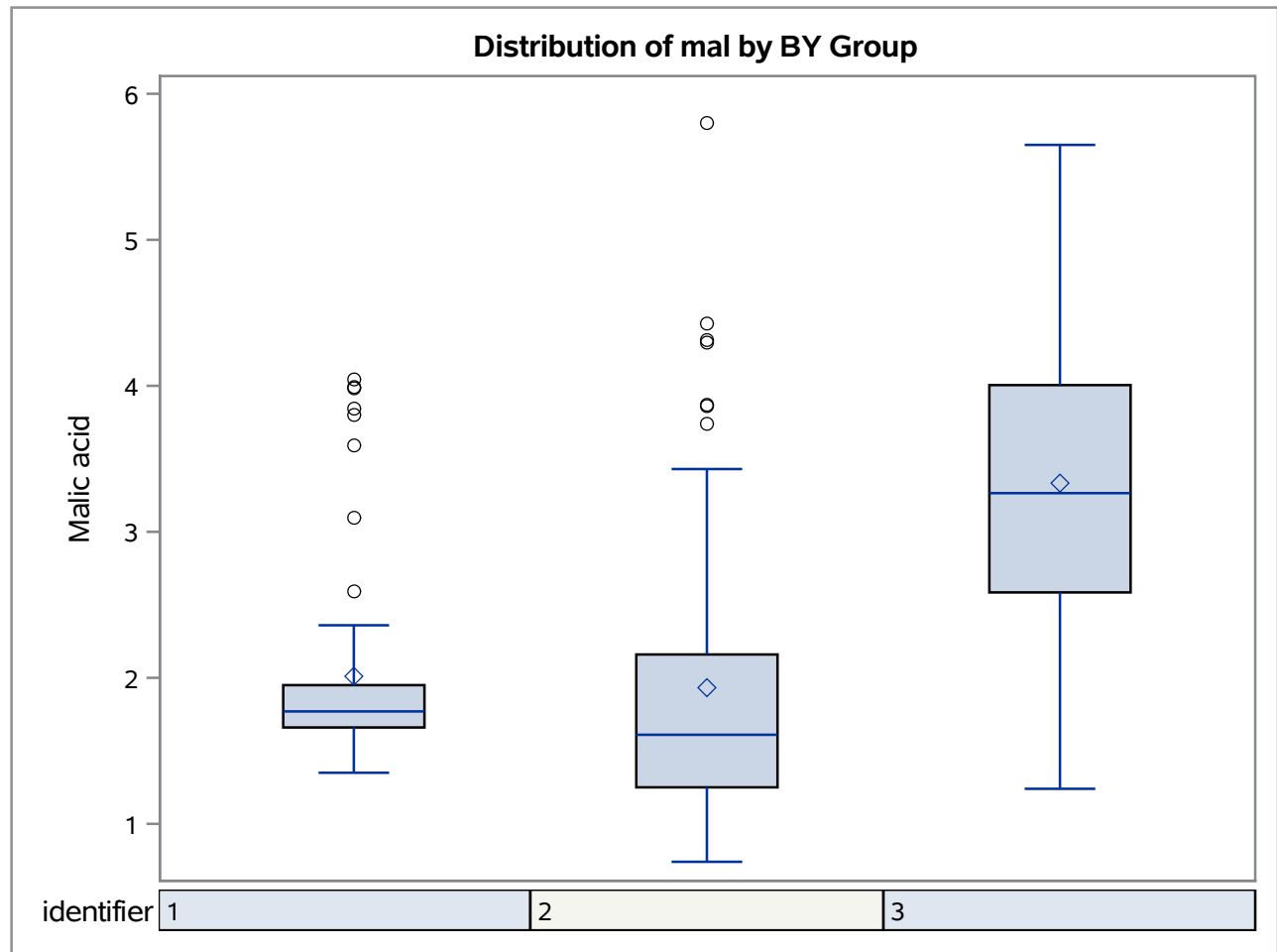
Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
1.24	135	4.95	144
1.29	155	5.04	147
1.35	131	5.19	156
1.67	160	5.51	138
1.68	159	5.65	174

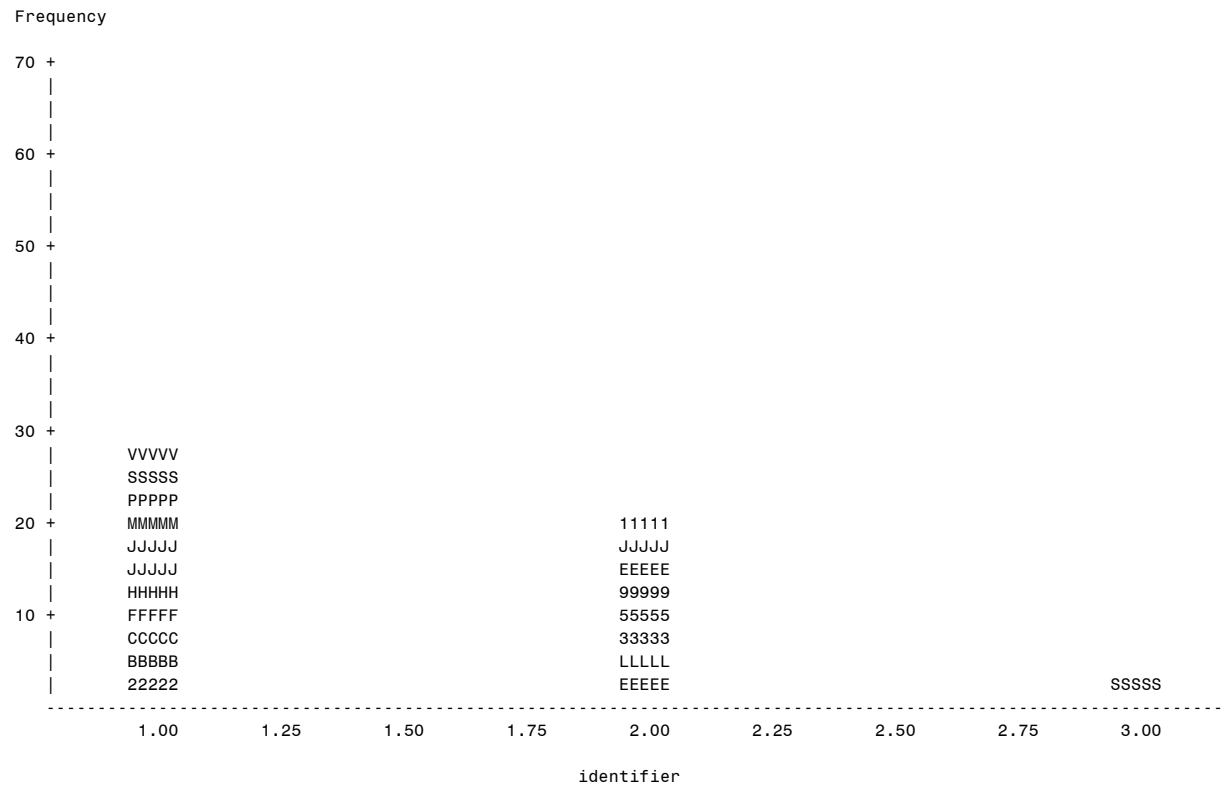
The UNIVARIATE Procedure

identifier=3



The UNIVARIATE Procedure

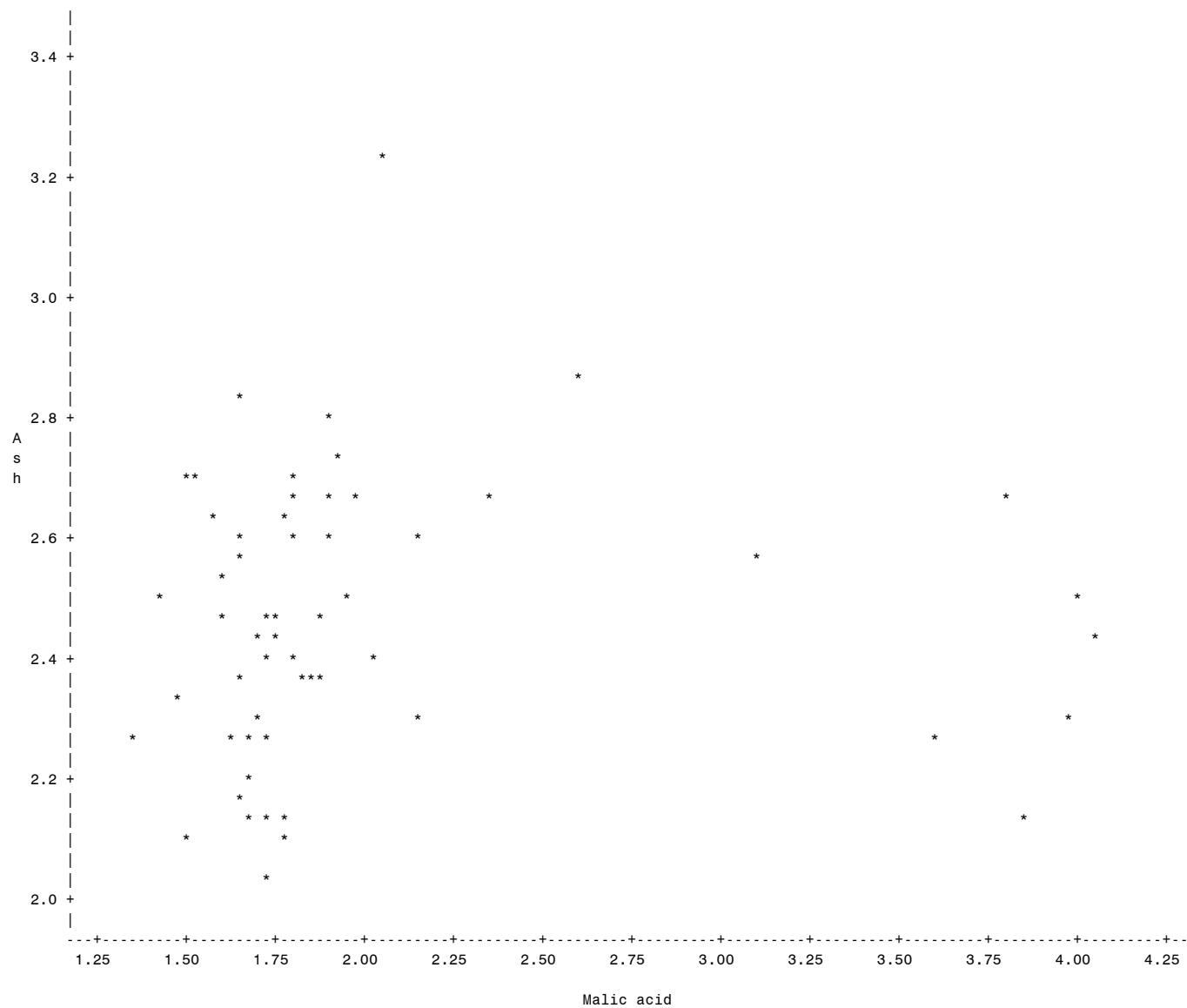




Symbol	mal	Symbol	mal	Symbol	mal	Symbol	mal	Symbol	mal	Symbol	mal	Symbol	mal	Symbol	mal
A	0.74	B	0.89	C	0.90	D	0.92	E	0.94	F	0.98	G	0.99	H	1.01
I	1.07	J	1.09	K	1.10	L	1.13	M	1.17	N	1.19	O	1.21	P	1.24
Q	1.25	R	1.29	S	1.33	T	1.34	U	1.35	V	1.36	W	1.39	X	1.41
Y	1.43	Z	1.45	0	1.47	1	1.48	2	1.50	3	1.51	4	1.52	5	1.53
6	1.57	7	1.59	8	1.60	9	1.61	A	1.63	B	1.64	C	1.65	D	1.66
E	1.67	F	1.68	G	1.70	H	1.71	I	1.72	J	1.73	K	1.75	L	1.76
M	1.77	N	1.78	O	1.80	P	1.81	Q	1.83	R	1.86	S	1.87	T	1.88
U	1.89	V	1.90	W	1.92	X	1.95	Y	1.97	Z	1.99	0	2.02	1	2.05
2	2.06	3	2.08	4	2.12	5	2.13	6	2.15	7	2.16	8	2.31	9	2.36
A	2.39	B	2.40	C	2.43	D	2.45	E	2.46	F	2.51	G	2.55	H	2.56
I	2.58	J	2.59	K	2.67	L	2.68	M	2.76	N	2.81	O	2.83	P	2.89
Q	2.96	R	2.99	S	3.03	T	3.10	U	3.12	V	3.17	W	3.24	X	3.26
Y	3.27	Z	3.30	0	3.37	1	3.43	2	3.45	3	3.55	4	3.57	5	3.59
6	3.70	7	3.74	8	3.80	9	3.83	A	3.84	B	3.86	C	3.87	D	3.88
E	3.90	F	3.91	G	3.98	H	3.99	I	4.04	J	4.10	K	4.12	L	4.28
M	4.30	N	4.31	O	4.36	P	4.43	Q	4.60	R	4.61	S	4.72	T	4.95
U	5.04	V	5.19	W	5.51	X	5.65	Y	5.80						

identifier=1

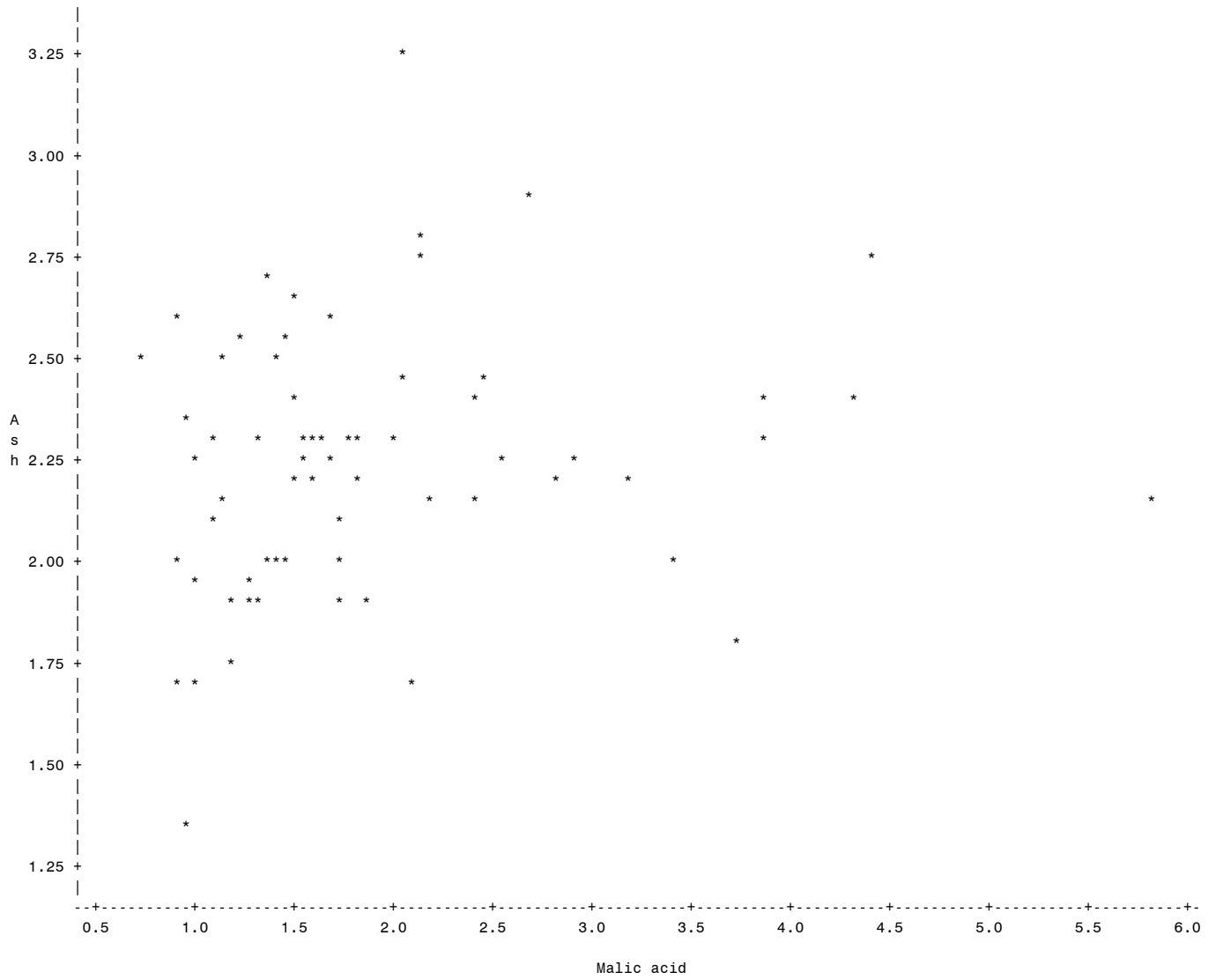
Plot of ash*mal. Symbol used is '*'.



NOTE: 2 obs hidden.

identifier=2

Plot of ash*mal. Symbol used is '*'.



identifier=3

Plot of ash*mal. Symbol used is '*'.

